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REMARKS

Applicant has amended claims 1 and 5 and cancelled claim 6. Applicant respectfully requests reconsideration in view of the amendment and the following remarks.

Applicant has amended claims 1 and 5 to the semiconductor substrate including copper or copper alloy interconnects. The specification at paragraph 40, lines 1 to 4 provides a basis for the limitation. In addition, claims 1 and 5 now include 0.0025 to 2 weight percent benzotriazole (BTA)—see paragraph 41. The nitrogen-containing compound now includes a weight percent range of 0.1 to 10. The specification at paragraph 36, lines 5 and 6 provide a basis for the limitation. Furthermore, the imine compound of claims 1 and 5 now includes either guanidine or formamidine. Tests 1 to 4 of Example 1 illustrate improved results for guanidine and formamidine compounds. Finally, claims 1 and 5 include the pH range of 8 to 11—see paragraph 38, lines 3 and 4. And claim 5 deletes the abrasive range for consistency with the “no abrasive” limitation. Applicant respectfully submits that the amendments enter no new matter.

The action rejects claims 1 and 3 to 8 as being anticipated by Manke [Rothergy et al.] (US Pat. No. 4,479,917) under 35 U.S.C. § 102 (b). The Rothergy et al. patent is to a oxygen-scavaging and corrosion inhibitor formulation. This formulation’s general scavaging oxygen and inhibiting features corrosion teach away from Applicant’s claim barrier removal slurry. In addition, this patent lacks the claimed BTA. Thus, since a simple corrosion inhibitor formulation teaches away from the claimed polishing fluid invention, and its formulation lacks BTA, it does not anticipate or suggest claims 1, 3 to 5, 7 and 8, as amended.

The action rejects claims 1 and 3 to 8 as being anticipated by Petrovich (US Pat. No. 3,951,786) under 35 U.S.C. § 102 (b). Petrovich disclose a formulation for froth flotation that

lacks BTA. Thus, since this froth flotation formulation lacks BTA, it does not anticipate or suggest claims 1, 3 to 5, 7 and 8, as amended.

The action rejects claims 1 and 3 to 8 as being anticipated by Bernhardt [Wojtczak et al.] (US Pat. Pub. No. 2002/0065204) under 35 U.S.C. § 102 (b). Wojtczak et al. disclose a plasma residue cleaner that lacks BTA. Thus, since Wojtczak et al. fail to disclose or suggest the claimed BTA-containing barrier fluid, Wojtczak et al. do not anticipate or suggest claims 1, 3 to 5, 7 and 8, as amended.

The action rejects claims 1 and 3 to 8 as being anticipated by Lee et al. (US Pat. No. 6,436,834) under 35 U.S.C. § 102 (b). Lee et al. at Col. 2 to 7, disclose that the slurry includes 0.1 to 30 weight percent abrasive. In addition, the examples of Lee et al. all contain large amounts of abrasive. Unlike Lee et al., Applicant claims a polishing fluid having no abrasive. Thus, since Lee et al. fail to disclose or suggest a polishing fluid containing no abrasive, but in fact teach essential use of abrasive, Lee et al. do not anticipate or suggest claims 1, 3 to 5, 7 and 8, as amended.

The action rejects claims 1 and 3 to 8 as being anticipated by Phelps et al. (US Pat. Pub. No. 2004/0104377) under 35 U.S.C. § 102 (e). Phelps et al. disclose a composition containing a pigment powder. Since the pigment powder would act as an abrasive, it teaches away from Applicant's claimed no abrasive polishing fluid. Thus, because Phelps et al.'s pigment teaches away from the claimed no abrasive polishing fluid, Phelps et al. do not anticipate or suggest claims 1 and 3 to 8, as amended.

The action rejects claims 1 and 3 to 8 as being anticipated by Skee (US Pat. No. 6,465,403) under 35 U.S.C. § 102 (b). Skee discloses a formulation for stripping photoresist, but

does not disclose the use of BTA. Thus, since this photoresist stripper formulation lacks BTA, it does not anticipate or suggest claims 1, 3 to 5, 7 and 8, as amended.

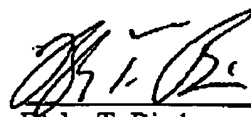
The action rejects claims 1 and 3 to 8 as being anticipated by Fujisue [Moringa et al.] (US Pat. No. 5,885,362) under 35 U.S.C. § 102 (b). Moringa et al. disclose a surface treatment formulation for use with a metal deposition inhibitor. This formulation also lacks a disclosure of BTA. Thus, since this surface treatment formulation lacks BTA, it does not anticipate or suggest claims 1, 3 to 5, 7 and 8, as amended.

The action rejects claims 1 and 3 to 8 as being anticipated by Aonuma et al. (US Pat. No. 4253886) under 35 U.S.C. § 102 (b). Disclose corrosion resistant ferromagnetic particles. Thus, since these ferromagnetic particles teach away from Applicant's claimed no abrasive polishing fluid, it does not anticipate claims 1, 3 to 5, 7 and 8, as amended.

Applicant respectfully submits that the amended claims are in proper form for allowance and respectfully requests reconsideration. If a telephone call would expedite prosecution, please call me at the number listed below.

Respectfully submitted,

Dec. 1, 2006  
Date

  
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